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(54) Title: **CHALAROPSIS LYSOZYME PROTEIN AND ITS METHOD OF USE IN ANTI-BACTERIAL APPLICATIONS**

(57) Abstract: A Chalaropsis lysozyme (Lysozyme Ch) is provided which has a corrected amino acid sequence and which can be utilized to prepare recombinant proteins having higher activity than those proteins prepared using the incorrect sequence. Methods are also provided to reduce immunogenicity or increase half-life of the lysozyme. The lysozyme Ch of the present invention will be extremely useful in killing bacteria, particularly resistance strains such as MRSA and VISA, and the enzyme can be utilized in a variety of settings wherein bacterial infection has been a particular problem such as the hospital setting or in veterinary applications, and can also be used as an effective means of combating bioterror agents.

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